

## CLAIMS

1. A composite material, which is a Mo-Cu based composite material having a Cu content of 30 to 70 weight % and which comprises at least one copper pool phases and a Mo-Cu composite phase, said copper pool phase being contained in an amount of 10 to 50 weight %.
2. The composite material according to claim 1, wherein said at least one copper pool phase has an average short diameter of 50 to 200  $\mu\text{m}$ .
3. The composite material according to claim 1 or 2, wherein said composite material is subjected to plastic deformation.
4. A member using the composite material according to any one of claims 1 to 3.
5. A heat-sink member using the composite material according to any one of claims 1 to 3.
6. A method of producing a composite material, comprising the step of compressing a matrix of Mo powder and a copper-based material having an average short diameter of 50  $\mu\text{m}$  or more and arranged in said matrix to obtain a compressed body and, optionally, sintering said compressed body to obtain a pre-sintered body, and the step of infiltrating copper or a copper alloy into said compressed body or said pre-sintered body to produce a composite material having a Cu content of 30 to 70 weight % and containing 10-50 weight % of at least one copper pool phase.
7. The method according to claim 6, wherein the copper-based material is powder which has an average short diameter of 50 to 200  $\mu\text{m}$  and which is mixed with said Mo powder before the compressing step.
8. A semiconductor apparatus using the heat-sink member according to claim 5.